ADEQ Arizona Department of Environmental Quality

VERY UNHEALTHY (201-300)

UNHEALTHY (151-200)

UNHEALTHY FOR SENSITIVE GROUPS (101-150)

MODERATE (51-100)

GOOD (0-50)

For more information visit:
http://www.epa.gov/airnow/aqibroch

AIR QUALITY FORECAST FOR WEDENSDAY, NOVEMBER 3, 2004

This report is updated by 1:00 p.m. Sunday thru Friday and is valid
for areas within and bordering Maricopa County in Arizona

FORECAST DATE NOTICES (*SEE BELOW FOR DETAILS) AIR POLLUTANT	YESTERDAY MON 11/1/2004 NONE Highest AQI Reading/Site (Preliminary data only)	TODAY TUE 11/2/2004 NONE 	TOMORROW WED 11/3/2004 NONE	EXTENDED THU 11/4/2004 NONE
O3*	**33** **Fountain Hills & Pinnacle Peak**	**32** **GOOD**	**35** **GOOD**	**32** **GOOD**
CO*	**7** **Greenwood**	**22** **GOOD**	**12** **GOOD**	**15** **GOOD**
PM-10*	**34** **West 43rd**	**36** **GOOD**	**49** **GOOD**	**54** **MODERATE**
PM-2.5*	**12** **Phx-Vehicle Emissions Lab**	**32** **GOOD**	**38** **GOOD**	**35** **GOOD**

* O3 = Ozone * CO = Carbon Monoxide * PM-10 = Particles 10 microns & smaller * PM-2.5 = Particles smaller than 2.5 microns

*"Ozone Health Watch" means that the highest concentration of OZONE may approach the federal health standard.
"PM-10 Health Watch" means that the highest concentration of PM-10 may approach the federal health standard.
"High Pollution Advisory" means that the highest concentration of OZONE, PM-10, or PM-2.5 may exceed the federal health standard.
"DUST" means that short periods of high PM-10 concentrations in dust storms – caused by outflow from thunderstorms – are possible.

Health message for Tuesday, November 2: **No health impacts expected.**

Health message for Wednesday, November 3: **No health impacts expected.**

Synopsis and Discussion

Happy Election Tuesday, 2004! It's going to be a great voting day weather-wise in Arizona Tuesday. I don't see residents of Flagstaff eager to get to the polls early with temperatures in the 20s and 30s, but by 4pm it should warm nicely to near 50°F. Phoenix will be in the mid 70s, but Friday and Saturday it will reach the 80s. Nice! The reason for the warm up is the trough of low pressure in New Mexico and Texas will be pulling off to the east the next couple of days allowing the southwest to be dominated by high pressure. There is a system we will be watching the next few days, however. A cut-off area of low pressure will develop off the coast of southern California and sit there through the weekend. As it gains strength, the models suggest that it will be picked up by the main jet and roll into Arizona by Monday. Yes, another cold rain event is possible, and snow is likely for the higher elevations of Arizona Monday. Air quality in the forecast area is all Good thanks to the cleansing winds from the north yesterday. Very little change is expected this week until Particulates nudge into the Moderate category possibly on Thursday. Enjoy the weather this week, and don't forget to vote Tuesday! –J.Paul

MONITORING SITE MAPS: STATIC MAP - **http://www.azdeq.gov/environ/air/monitoring/images/winter.jpg**
INTERACTIVE MAPS - **http://www.maricopa.gov/envsvc/air/ozair_map.asp**
http://www.epa.gov/airnow/index.html

POLLUTION MONITOR READINGS FOR MONDAY, NOVEMBER 1, 2004

O3 (OZONE)

For 2004 ozone season review visit:
http://www.epa.gov/airnow/2004/ozone-recap/o3-season-end-2004.html

SITE NAME	MAX 8-HR VALUE (PPB)	MAX AQI	AQI COLOR CODE
Apache Junction	**36**	**28**	
Blue Point	**40**	**31**	
Central Phoenix	**35**	**27**	
Fountain Hills	**42**	**33**	
North Phoenix	**40**	**31**	
Phoenix Supersite	**37**	**29**	
Pinnacle Peak	**42**	**33**	
South Phoenix	**36**	**28**	
South Scottsdale	**32**	**25**	
West Phoenix	**40**	**31**	

CO (CARBON MONOXIDE)

SITE NAME	MAX 8-HR VALUE (PPM)	MAX AQI	AQI COLOR CODE
Buckeye	**0.0**	**0**	
Central Phoenix	**0.2**	**2**	
Dysart	**0.2**	**2**	
Glendale	**0.0**	**0**	
Greenwood	**0.6**	**7**	
Mesa	**0.0**	**0**	
North Phoenix	**0.0**	**0**	
Phoenix Supersite	**0.5**	**6**	
South Phoenix	**0.1**	**1**	
South Scottsdale	**0.3**	**3**	
Tempe	**0.1**	**1**	
West Chandler	**0.3**	**3**	
West Indian School	**0.3**	**3**	

West Phoenix	**0.2**	**2**	

PM-10 (PARTICLES)

SITE NAME	MAX 24-HR VALUE (ug/m3)	MAX AQI	AQI COLOR CODE
Buckeye	**15.8**	**14**	
Central Phoenix	**18.1**	**16**	
Durango	**26.0**	**24**	
Higley	**17.8**	**16**	
Phoenix Supersite	**15.8**	**14**	
West Forty Third	**37.4**	**34**	

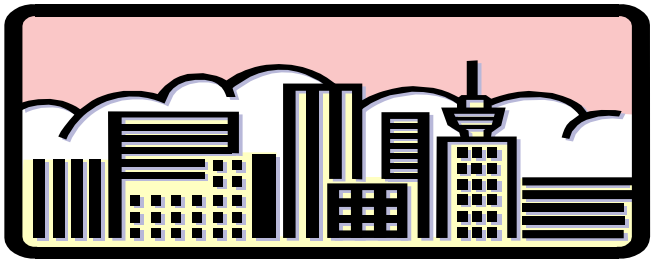
PM-2.5 (PARTICLES)

(Data derived from light-scattering equipment)

For maps go to: http://www.airnowdata.org/pmfine/latest.html

SITE NAME	MAX 24-HR VALUE (ug/m3)	MAX AQI	AQI COLOR CODE
Dysart	**1.2**	**4**	
Estrella Mtn Park	**3.3**	**11**	
Phoenix Supersite	**3.5**	**11**	
Veh Emissions Lab	**3.8**	**12**	

LOCAL AIR POLLUTANTS IN DETAIL



O3 (OZONE):

Description – This is a secondary pollutant that is formed by the reaction of other primary pollutants (precursors) such as VOCs (volatile organic compounds) and NOx (Nitrogen Oxides) in the presence of heat and sunlight.

Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NOx is emitted from motor vehicles, power plants, and other sources of combustion.

Potential health impacts – Exposure to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other effects include decrease in lung function, chest pain, and cough.

Unit of measurement – Parts per billion (ppb).

Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight).

Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.

CO (CARBON MONOXIDE):

Description – A colorless, odorless, poisonous gas formed when carbon in fuels is not burned completely.

Sources – In cities, as much as 95 percent of all CO emissions emanate from automobile exhaust. Other sources include industrial processes, non-transportation fuel combustion, and natural sources such as wildfires. Peak concentrations occur in colder winter months.
Potential health impacts – Reduces oxygen delivery to the body's organs and tissues. The health threat is most serious for those who suffer from cardiovascular disease.
Unit of measurement – Parts per million (ppm).
Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight)
Reduction tips – Keep motor vehicle tuned properly and minimize nighttime driving.

PM-10 & PM-2.5 (PARTICLES):

Description – The term "particulate matter" (PM) includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as "fine" particles and are responsible for many visibility degradations such as the "Valley Brown Cloud" (see http://www.phoenixvis.net/). Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse".
Sources – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.
Potential health impacts – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis.
Units of measurement – Micrograms per cubic meter (ug/m3)
Averaging interval – 24 hours (midnight to midnight).
Reduction tips – Stabilize loose soils, slow down on dirt roads, carpool, and use public transit.